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226 and 4, the various Ainu fishing techniques, fishing localities and fishing sea-
182 sons were closely adjusted to the habit and ecology of the dog salmon. Thus the Ainu activities in catching the fish were concentrated to and around its spawning grounds. Both the ichthyological data cited in Note 28 and Ainu information indicate the annual reccurrence of the major spawning grounds in the same places. Each local group controlled a certain number of these
[621] spawning grounds which were distributed near its settlement or settlements, and each settlement group exploited intensively the ground or grounds nearest to them and controlled by their local group (pp. 59-60).

Hunting Devices.

Bows and Arrows.

411 The bow and arrow were the only hand weapons to Ainu hunters. Some
224 Ainus kept spears with iron points which were obtained by means of trade,
[439] but there is no evidence that the spear was ever used in their regular hunting activities. They hunted deer and bears with the hand-bow, *chiani ku*, and the spring-bow, *amappo*, both simple bows (Fig. 5, a & b). The arrow shaft
[278] for the former is a grass stem and that for the latter wooden. Both have an arrowhead made of a kind of bamboo and are always coated with aconite
[502] poison. Only the males were to handle them.

The spring bow was set firmly on a tree stump by the side of a trail, with a string fastened on one end to the trigger and stretched across the trail of bear and deer in such a way that the poisoned arrow be shot automatically at the touch of any animal. The tip of the arrow fixed was sheathed in a roll of bark to protect the poison from rain and dew. The arrow lacked the connecting line for holding the game shot. The chief duty of a hunting group staying at the hunting hut was to set a number of spring bows and arrows in the hunting ground, *kuari ushi*, and keep their rounds inspecting continually.

224 Apart from their use in association with the deer fence, the spring bow, set as they were alone in inconspicuous positions in a mountain hunting
[622] ground, could be a great danger to human beings as well. Accordingly, their use was strictly regulated by the headman as one of his important duties.
[476] In practice, they were set by each cooperative group of hunters working as
[311] a unit, centred in a specific area of one dale valley as a unit. The areas, *kuari ushi*, places for setting bows, were found either on the upper reaches of the dales which feed the river along which their *kotans* were distributed, chiefly for deer hunting, or in the dale valleys at the sources of the river for bear hunting (Fig. 8). Unless abandoned, the same area was used successively by one group over many seasons. Except when used in association

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with the deer fence, no setting of spring bows was allowed on the lower plain or on the lower reaches of a valley, where not only hunters but Ainus in general had occasion to go about.

Deer Fence.

The *kuteki*, a wooden fence construction for catching deer, varied in length from a few hundred metres to several kilometres. It had narrow openings at certain intervals where spring bows were set with poisoned arrows. The deer fence was usually set up near oak woods, *komni-tai*, on the level plain or near woods of mixed trees by streamlets, *nitat*, on the wide slopes of a hill, intercepting the deer tracks. It was built and used either by one independent family or by two or three families from the same settlement cooperating as a hunting group. The deer track, *yuk apiri*, remained comparatively stable, so that the same structure was repaired and used over successive seasons by the same cooperative group that built it. The deer fence was usually erected neither too far from the settlement nor too near. Usually situated within only 4 or 5 kilometres, it was easily patrolled by visitors from their homes. However, some families from Nitmap in Tokapchi built their deer fences farther away than the others; the hunters migrated every season to huts erected near the constructions (Map 2).

MATUURA, on his official exploration of the Ainu territory in 1857-58 observed and recorded an actual example of a long deer fence constructed on a hill slope not too far from Ainu settlements (MASAMUNE, ed., 1937, Vol. 2, p. 396).

Hunters' Hut.

While hunting in the hills and mountains, the Ainu used two different kinds of hunters' huts. The distinction is made, not according to the style or construction, but to the use and location of the huts. One type, set up near the winter quarters of deer and used chiefly for deer hunting was usually known as *iramande chise*. The other type, built near the hibernation centre of bears and used mainly for bear hunting, was usually called *Kimun kashi* or *kucha ko chise*. The difference in location between these two kinds will be described later in sections dealing with deer- and bear-hunting. In either case, the hut was located in a dale valley, and the area lying upstream formed the hunting ground, i.e. *ku ari ushi*, place for setting bows, for the occupants (p. 59). The hut rectangular in plan and measuring ca. 5×4 to 3×2 metres, was roofed with bamboo grass or bark of fir trees. Usually, it had four walls, but sometimes a mere gable served the purpose. Except in the absence of a porch and outdoor frames for drying meat and the addition of a small shed, *ku o kashi*, for storing spring bows and arrows, the fundamental

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In spring when the snow had disappeared from the plains, the Ainu set to work collecting wild plants. Their work continued incessantly and with persistence till it was autumn when dog salmon began ascending the rivers. Of the species listed in the chart, Nos. 6, 9 and 19 were especially important as food for bear cubs kept in their homes. Most of the plants collected were dried and stored away in sufficient quantities to last the winter. During spring and summer all varieties with edible leaves, stalks, or roots which the Ainu needed were taken in. In summer *trep* roots were chiefly collected. Those groups that did no farming as in Otopuke gathered these roots with hardly a day's rest during the season. The roots were made into starch for storage. On the other hand, those groups that did some farming (p. 41) seem to have gathered roots with less frequency and in smaller quantity.

In autumn, fishing and hunting activities of the Ainu reached their climax in preparation for the approaching winter. But even at this season certain kinds of edible plants such as nuts, fruits and berries, were collected, though not in such quantities as would last any great length of time. A few varieties of nuts, for instance, acorn and walnut, were exceptions.

The greater part of plants for raw materials were also gathered during autumn, a task in which women again played a major role. In this manner, when base snow covered the ground, the Ainu had completed all their collecting activities. All these activities were arranged in season, so that they were adapted to the ecology of plant life. On the basis of vegtation the Ainu classified the different parts of their land into the following types as forming their main collecting grounds.

Types of Land	Ainu Term	Plants Mainly Collected
Woodland on river bank	*kenashi*	3, 5, 7, 9, 10, 12, 14
Woodless field on either river bank or river terrace	*mup*	1, 2
Oak wood on river terrace	*komni tai*	1, 2, 3, 8, 13, 18
Woodland by the side of streamlets on river terrace	*nitai*	6, 9, 10, 11, 12, 13, 14

Numbers correspond to those associated with the plant names cited in the list.

The terrace on which the *kotan* stood and its adjoining river bank provided the collecting grounds for their food plants (Fig. 8). Here also were found flora for raw materials, fire-wood, and almost all other plants, excepting a few special items like Ulmus laciniata for clothing or Aconitum for arrow poison. The former species were usually found distributed in plenty and collected in the mountains in the upper reaches of a river (p. 66). Aconite

1, [Errata: the word "vegtation" should read "vegetation". Cf. errata sheet, p. 164-A--Analyst]

of the kind which was believed to be best for arrow poison were localized in their occurence (p. 66). The four types of land cited above were invariably distributed along any river, so that almost all necessary collecting was usually done within a short radius of the *kotan*, or within a day's trip and back at the most. In the case of these particular species that were necessaries and that could only be found a long way from their homes, expeditions were sent out. The task of getting almost all edible plants, as well as varieties for raw materials, was undertaken by women and children.

Cultivation of Plants.

Before the land-allotment to the Ainu by the Japanese Government (Notes 9 and 10), the Ainu in the Otopuke valley and a half of the member households of the local group in Kuttaraushi who lived furthest upstream on the Tokapchi and at least a household in Pipaushi further downstream, had done no farming, but other Ainus in the Tokapchi valley as well as, for instance, those in the Azuma valley, had done some small-scale farming[19]. The old techniques were simpler and the farm work was usually performed by women. The main crops were a variety of Panicum Crusgalli, *piyapa* or *ayushi amam*, and a variety of millet, *amam* or *toita amam* or *munjiro*. Preparation of field and sowing were done in July after storing of chief varieties of edible leaves was finished. Suitable plots on the river bank near their settlement were cleared and levelled with small wooden picks, *shittap*, which were also used for digging up roots and plants. Some families on the Tokapchi used a kind of sickle besides the above-mentioned implement. After the plots were prepared, sowing followed without making any ridges. Weeding was done only once or twice between the time of sowing and the harvest. The crops were harvested by picking ears with an implement made of a molluscan shell collected in the river, dried and stored. These jobs were done during the period between the last part of September and the middle or last part of October. The area cultivated by an average household in Azuma, Saru, Mukawa and Shikot is estimated by the present writer to have been between ca. 1000 and 2000 square metres. When the soil was exhausted the plot was abandoned and a new one prepared. In any valley there seems to have been no shortage of land for cultivation in those days. The cycle of shifting cultivation appears to have varied from area to area.

Food-getting Activities.

Every individual of every species of animals must get its food in order to sustain itself, and food-getting activities may claim to be of basic importance in its existence. Up to comparatively recent times, before the introduction of agriculture in its rudest form, the Ainu had lived by hunting and

1, [Errata: the word "of" should read "to". Cf. errata sheet, p. 164-A--Analyst]

2, [Errata: the word "from" should read "form". Cf. errata sheet, p. 164-A--Analyst]

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Winter.—When the base snow began accumulating, those animals concerned stopped their local migration and became inactive. Then the Ainu, whose techniques were adapted to such ecology, stopped their positive gathering activities to remain inactive until the next spring, like all other animals; neither deer hunting nor salmon-catching was their business any longer, all bear hunters home from the deep mountains. It is true that some Ainu hunters went to the winter quarters of the deer to supplement the winter provisions for their families or their neighbours in the same group, but it seems that such supplementary or secondary activities used to be all over within the earliest part of the season. And now that their stores were fulfilled and their outdoor activities over, festivity thrived among them all; they gathered for feast and ceremony, to which relatives and friends were invited from different local groups to observe the ritual killing of the bear-cub, which had been kept and fed specifically for this occasion (Note 67).

Except active hunters who used to go to their hunting huts every spring and autumn for a period of usually about a month or more each, every one lived in his own settlement throughout the year and would be engaged in collecting, fishing, and even hunting. The food plants which they collected were found distributed all over the river-banks and river-terraces. The distribution of resources were not restricted exclusively to any particular place, but in relation to their techniques, fishing and hunting grounds were roughly localized. For the Ainu fishing techniques, a concentration of dog-salmon spawning-beds and its surroundings were the best grounds. Thus the greater part of their time and energy for gathering were spent around their *kotan* near the river. It is very likely that the dispersion or concentration of a local group was correlated closely with its ecology in relation to salmon fishing, especially its adjustment of fishing techniques to the spawning grounds. The interrelationship between cycles of gathering activities, sex division of labour and changes of activity fields are diagramatically shown in Fig. 7.

The sequence of gathering activities and their correlations with seasonal changes in their respective habitat are practically the same in Tokapchi, Otopuke and Azuma except for minor fluctuations in individual activities and time of changes. The following phenological chart refers to Nitmap in the upper Tokapchi.

1, [Errata: the word "locol" should read "local"--Analyst]
2, [Errata: "ldg" should read "ing"--Analyst]

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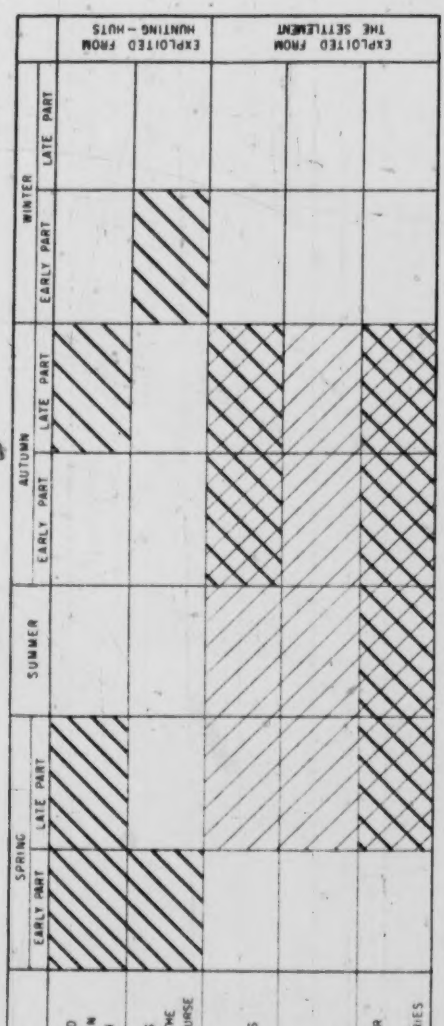

Fig. 7. Seasonal changes in the activity fields of male and female Ainus.

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Geographically Defined River System	Component River around which a River Group Evolved	Number of River Groups & Their Territories
Azuma River	Azuma	1
Mukawa River	Mukawa	1
Ishikari River	Ishikari Shikot Others unidentified	2 (or more ?)
Saru River	Saru ?Nukapira[46]	1 (or 2?)
Tokapchi River	Tokapchi Tushipet Ashoro Otopuke Satnai	5

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Each territory utilized exclusively by the residing river group can be divided according to Ainu's exploitation activity into the following five ecological zones (Fig. 8):

(1) the river and its tributaries,
(2) the river banks,
(3) the river terraces,
(4) the stretch of hillsides along the river course,
(5) the high mountain region around the source of the river.

In order to supply themselves with a set of biotic species needed for subsistence, the Ainu exploited these different areas in accordance with particular ecologies of species and particular techniques for their exploitation. In this manner the territory occupied by a river group formed a nearly or completely self-sufficient unit of Ainu habitat. Sometimes, a failing supply of a needed item within its own area or a finding of better sites without, induced some members of a river group to pass across its boundary. Two of such essential items were the bear and the aconite plant for preparing arrow poison. Except for these, all river groups were self-sufficing in necessary items (p. 85). In short, the Ainu had seldom to overstep their boundaries for gathering purposes. As regards the staple items in particular, such as deer, dog salmon, cherry salmon and edible plants, every river group was at ordinary times sufficiently supplied from resources found within its own territory.

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When for gathering purposes any one was to step into a river group territory other than his own, no matter for what, where and how, the person was required to obtain from some one of the headmen of the river valley concerned a formal permission accompanied with a rigid ritual procedure. And there was possibility of such permit not granted by a headman who had

[TEXT CONTINUED ON PAGE 59]

Fig. 8. Diagram representing a river valley as the territory of a river group and its ecological zones.

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the sole power to act in the matter. On getting permission, the person was made acceptable to all other local groups within the territory through communication and introduction by the issuing headman (p. 77).

Territories Maintained by Groups Smaller than the River Group within the Territory of the River Group[47].

The following territories were maintained by individual simple families, cooperative groups and local groups forming the larger group, i. e. the river group: places for setting bows and deer-fences, named concentrations of spawning beds of dog salmon, sites for peep-fishing huts, fish-traps and weirs.

Evidence from Saru suggests that a site for digging aconite in the lower Saru was under control of a local group nearest to it (WATANABE, 1951, pp. 78-79). It is true that collecting sites for the plant of 'best' quality were localized (p. 66). The territoriality on the sites in other areas is unknown. It seems to be certain that bears' dens were owned by Ainu hunters but the category of the controlling body can not be identified clearly.

Types of Territory

Territory Maintained by the River Group as a Whole	Territories Maintained by Smaller Groups within the River Group	Controlling Body	Condition of the Place
River basin as prescribed by the Ainu	Site for peep-hut (*worun chise karu ushi*)	Individual simple family	Unstable
	Site for fish-trap (*urai karu ushi*)		
	Site for weir (*tesh karu ushi*)	Cooperative group	Stable
	Place for setting bows (*ku ari ushi*)		
	Place for deer-fence (*kuteki ushi*)		
	Named concentration of spawning beds of dog salmon (*yaicharo iki, ichan* or *ichanuni*)	Local group	Very stable

The ichthyological characters of the spawning beds and grounds of dog salmon have already been described (Note 28). It was customary with each Ainu local group to give a name to the respective spawning grounds near their settlement where spawning beds of the salmon recurred every season in a greater concentration than elsewhere and to observe anually a series of rituals for these as the controlling body of the particular fishing grounds (p. 72). Each settlement was usually situated near one of the spawning grounds

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of their own local group which was exploited most intensively by the settlement group. It is evident that besides these spawning grounds controlled by local groups there were many other smaller spawning grounds and scattered spawning beds which were neither named nor claimed by any group but were open to any members of the river group for exploitation without permission. Examples of spawning grounds thus named and controlled by local groups are given as follow (Map 2).

Named Spawning Grounds on the Otopuke, a Tributary to the Tokapchi[48]
(in descending order of location)

Name of Spawning Ground	Approximate Length (yd.)	Group Exploiting Regularly	Controlling Body
Naitai-putu Un Ichanuni	40	Naitai settlement group	Local group of upper Otopuke*
Kamaune Un Ichanuni	200	Kamaune settlement group	"
Wop-putu Un Ichanuni	100	Wop settlement group	"
Nipushipet Un Ichanuni	200	Nipushipet settlement group	Local group of lower Otopuke
Ochirushi Un Ichanuni	40	Ochirushi settlement group	"
Otopuke-putu Un Ichanuni**	300-400	Settlement groups lower than Nipushipet	"

Named Spawning Grounds on the Upper Tokapchi[49]
(in descending order of location)

Name of Spawning Ground	Approximate Length (yd.)	Group Exploiting Regularly	Controlling Body
Kamuirokki Un Ichan	200	Kuttarashi settlement group	Kuttarashi Group as local group
Honnarakki Un Ichan	100	"	"
Wenshiri Un Ichan	400	"	"
Umshupenai Un Ichan	600 or more	"	"
Sustaifulsam Un Ichan	300	Nitmap settlement group	Nitmap group as local group
Nitmap Un Ichan	400	"	"
Parato Un Ichan	200 or more	"	"
Tomamapet Un Ichan	200	"	"
Kapot-pira Un Ichan*	300	Pipaushi settlement group	Pipaushi group as local group
Ohorukot Un Ichan	200	"	"
Okatmapka Un Ichan (on the Sahorun, a tributary)	100	"	"

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Name of Spawning Ground	Approximate Length (yd.)	Group Exploitung Regularly	Controlling Body
Tannepet Un Ichan	more than 400	Kumaushi settlement group	Kumaushi group as local group
Pashiushi Un Ichan	200	"	"
Shipenpet Un Ichan**	300-400	Sanenkoro settlement group	Sanenkoro group as local group
Enkoroomanai-putu Un Ichan (on the Sahorun)	100	"	"
Nupuchimip-putu Un Ichan (on the Sahorun)	200	"	"
Sahorun-putu Un Ichan (on the Sahorun)	200	"	"
Sarunnai-putu Un Ichan (on the Shikaripet, a tributary)	?	Sarunnai settlement group	Moseushi group as local group
Nyashikesh Un Ichan (on the Shikaripet)	above 200	Nyashikesh settlement group	"
Kuttekuush Un Ichan (on the Shikaripet)	200	Moseushi settlement group	"
Penke-pipaushi Un Ichan	?	Penke-pipaushi settlement group	(Particulars unknown)
Kene Un Ichan	600	Kene settlement group	Kene group as local group
Kiushiful Un Ichan	400	"	"
Reukenupuru Un Ichan	200-400	"	"
Chepotpiuka Un Ichan***	300	Memroputu settlement group	Memroputu group as local group
Nutap-etufu Un Ichan	above 200	"	Possively Memroputu group as local group
Uparupenai Un Ichan	200-250	"	"
Kutu Un Ichan	200-250	"	"
Pira-chorupok Un Ichan	250	Fushikopet and Furemem settlement group	(Particulars unknown)
Memro-putu Un Ichan	100	"	"
Shipet-arike Un Ichan	?	"	"
Chep-makanpet Un Ichan	250	Ponsatnai settlement group	(Particulars unknown)

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Named Spawning Grounds on the Satnai, a Tributary to the Tokapchi[60]
(in descending order of location)

Name of Spawning Ground	Approximate Length (yd.)	Group Exploiting Regularly	Controlling Body
Nupokomap Un Ichan	200	Nupokomap settlement group	Nupokomap group as local group
Riyoromap Un Ichan	?	"	"
Urekarip Un Ichan	600	Urekarip settlement group	Urekarip group as local group

[115]

The analysis of the spawning grounds on the Azuma is incomplete owing to the death of Ushintasan, the chief informant from the area. There are some data on the spawning grounds on the Saru; however, the time horizon concerned is shortly after the land allotment[61].

The nature of the hunting grounds was previously explained in relation to their hunting devices (p. 31; Notes 33 and 37). Distribution of the hunting grounds of the cooperative groups from Nitmap and Pipaushi is shown in the charts in pp. 45-46 and in Map 2.

The area of the territories maintained by a given group never extended beyond the capacity of the group for direct and efficient exploitation of them. Nor were any new grounds sought elsewhere until those hitherto utilized had fallen unproductive. If a group moved to a new locality leaving its ground in disuse, it ceased to have claim on the old territory. The number of fish-trapping sites varied to a considerable extent with different familes. This means that more traps were used by families with less catches by spearing against the total amount of supply needed. How these holdings by individual simple families and cooperative groups were inherited remains to be explored.

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Each territory held by simple family, cooperative group or local group served as a ground for supplying specific resources, but it was only for a period of time peculiar to the ecology of each game to be obtained. For example, the bear-hunting ground was good only in spring and autumn and the dog-salmon spawning-grounds in autumn only. As a result, territorialism held by the Ainu for their localities waxed strong in season and nearly or entirely vanished out of season. On the other hand, inter-river-group-territorialism—territorialism which a river group displayed for its own river valley—induced them go refuse a stranger or outsider to exploit any kind of its resources without permission, whether in season or out of season.

[619]

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Except spawning grounds of dog salmon and colonies of aconites, these territories controlled by the smaller groups within the river group are found in every instance to be fishing or hunting grounds furnished with fixed instruments. Unless conditions for exploiting specific resources did not fall off,

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423 the same group enjoyed a successive use of the same site within which no outsider could bring in specific instruments or exploit specific resources. 423 They were to 'refrain' from such acts. Spawning grounds of the dog salmon 619 were not available even to fellow river-group-members except on permission [628] formally obtained from the headman of the controlling local group. Such permission could be had whenever asked by anyone in the same river group (p. 77).

Except for such specified localities, the entire area within the river group territory might be utilized freely by any member belonging to the group. In this open area any person, male or female, could freely open up a new ground for set-bow hunting or trap-fishing, go hunting with hand-bow, or go about collecting plants. It appears that even the aforesaid specific localities were open to anyone in the same river group when it was not season assigned for a particular locality.

[311] Despite the presence of the aforesaid free-gathering areas within the river group territory, the Ainu usually were able to obtain most of their necessary supplies from the immediate surroundings of each settlement without having to go out great distances for the gathering (Maps 2).

226 Areas Actually Covered by Ainu Gatherers (Map 2).

311 Fishing Areas.

628 Generally, the dog salmon was taken for the most part in and around the spawning grounds found near the settlement. Favourable sites for the use of fixed fishing gear and hidings of the salmon suited for daytime spearing, were all found centred around the concentrations of the spawning beds or spawning grounds which best fitted night spearing (Figs. 3 and 4). Some fishermen from each settlement went farther down their stream in early season; as the season advanced they turned upstream and then went down again in late season, for the farther downstream, the earlier the arrival of the salmon and the longer its stay and the farther upstream, the earlier the spawning (Note 26). Thus some of Otopuke and Azuma fishermen went into the area of the next settlement or even farther within the territory of their river group; but the fishermen on the upper Tokapchi seldom went to the area close on an adjacent settlement. The people of Opchapet and Ichanpet settlements in Otopuke, who had relatively few and sporadic spawning beds near their settlements, went to the spawning grounds regularly exploited by the neighbouring Kamaune settlement belonging to their local group and by permission went farther down to the spawning ground of the Nipushipet settlement which belonged to another local group. By the same reason the people of Azuma, a settlement and a local group belonging to the Azuma river group, went fishing dog-salmon up in the water area near the adjacent

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settlement, Tonika, another local group upstream. The people of Moseushi, a local group on the Shikaripet tributary to the Tokapchi, fished dog salmon in and around their own spawning grounds; however, as their catch there was not sufficient for all their need, some of the younger members used to go fishing in the main stream of the Tokapchi near Nitmap. Some of the young members of Moseushi local group, like Retapka and Takanru, children of Ranketuk of Moseushi, and Tunurawe, son of Kanuran, "had so many brothers that they could not get enough fish for them all in the Shikaripet but had to go fishing in the main Tokapchi as well." Every season they built temporary huts on the bank opposite the Nitmap settlement and engaged freely in spearing and basket-trap fishing in and around the small spawning grounds outside the named spawning grounds controlled by the Nitmap group. For cherry salmon fishing in the river along which Ainu settlements were distributed, the area covered by the settlement members fell in roughly with that for the dog salmon. Most members of each settlement did not usually go so far as to the area near the neighbouring settlement. Some bag-net parties from the Tonika settlement of the Azuma river group used to go down for cherry salmon fishing to the area a little beyond the next settlement, Azuma *kotan*. Cherry salmon fishing in smaller tributaries or glens, however, was not confined to around each settlement. For instance, such local groups on the upper Tokapchi as Nitmap, Pipaushi, Kumaushi and Sanenkoro, fished for cherry salmon centring on the glens of the Sahorun, one of the smaller tributaries of the Tokapchi; the four settlement groups belonging to the upper local group of Moseushi on the Shikaripet, fished for them in the glens around the Sarunnai, a small tributary to the Shikaripet.

Hunting Areas.

For deer hunting, fences set with spring bows were usually erected at the foot of hillsides near their own settlement, though some families such as the groups B and C of Nitmap (p. 45) on the upper Tokapchi built their fences farther away than the others and the hunters migrated every season to their huts erected near the constructions (p. 32; May 2). The ground for deer hunting with the spring bow near the game's wintering quarters, usually lay on the upper reaches of some tributary near their settlement. Both fences and hunting grounds near the wintering quarters of the game for each settlement group in Tokapchi and Azuma and fences in Otopke were usually found distributed around their settlements, although the area covered by one settlement group sometimes overlapped to some extent with that of an adjacent settlement group; such an overlapping may be seen between Nitmap and Kuttaraushi groups, as shown on Map 2. There is another case like the Shikot river group, from the settlements of which hunting parties migrated each

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224 season to concentrate on one region of its territory, a favourite wintering
311 quarter of deer on the Appenai.

Deer hunting with the hand bow was conducted also on and around the same sites near each settlement as fence-grounds and wintering quarters. They were seldom carried out into the area customarily covered by neighbouring settlement members. This meant the absence of such necessity, although any hunter with hand bow, like spearing fishermen with their movable instrument, might with justification enter an area covered by members of a nearby settlement. An exceptional case may be cited with the members of the settlement of the upper local group in Otopuke who concentrated on the area near the Wop settlement, where, alongside with local members, they chased with hand bow the deer gathering on the marshy grounds for mating.

Organized bear hunting was conducted by every river group on the uppermost reaches of the river, that is, the inmost recesses of the mountainous region where were hibernation centres of the bear. It was customary with every river group to send out their hunters in seasonal migration concentrating on the area. This does not always mean that every local group of the river group sent some bear hunter or hunters to the area. Among the Azuma river group, bear hunting parties were sent from two interior local groups, Tonika and Azuma, to the Shoruma and its surrounding area on the uppermost reaches of the river, but there is no evidence for any bear hunting party from the coastal local group, Spun, who it is said had no bear hunters. Of the Otopuke river group, the upper local group periodically sent their bear hunters to the riverhead area but the lower one did not, though some members of the latter group occasionally hunted bears while engaging in deer hunts on the neighbouring hillsides. As for the Tokapchi river group, the upper local groups, at least the uppermost *shine itokpa* group, had a number of bear hunters whose activities covered the riverhead area every season, while the local groups in the middle course had less bear hunters, who to all appearances went out in search of bears to the interior territory of the Satnai river group or that of the Otopuke river group. A few of the bear hunters from Pipaushi and Sanenkoro, both the local groups on the upper Tokapchi, went out of their river group territory into the area around the Sohshupet in the interior territory of the Saru river group, and some bear hunters from Kuttarashi, another local group on the upper Tokapchi, to an area on the upper reaches of the Sorapchi, an extention of the Tokapchi river group territory on the side of the Ishikari river. No information is available for the lower local groups on the Tokapchi. Information from Shikot, Mukawa and Saru shows that bear hunters of the generation before my informants, even those from some lower local groups, went to the areas on the uppermost reaches of their own river.

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Collecting Areas.

Of plant resources needed by the Ainu some were usually unavailable from the surrounding area of each settlement: those were aconite plants for the preparation of arrow poison and Ulmus laciniata for textile material. For the purpose of collecting aconite roots, members of the Otopuke river group went out to the Shikata valley near the coast in the territory of the Tokapchi river group. The valley and its environ near the coast of the Tokapchi territory appear to have been the main source of the plants for the Ainu on the whole river system of the Tokapchi. Those of the Azuma river group went out for that purpose as far as to Zenibako in southwestern Hokkaido, an area[1] which it is doubtful if any group claimed for its own. The Ainu of the Saru river in the days of their traditional life are said to have collected the plant from a site near Piraturu on their own river. In Otopuke and Azuma, the bark of Ulmus laciniata was collected mainly in the source areas of each river where good quality plants were plentiful. Practice among the Shikot Ainu in later times suggests that their traditional centre for collecting the bark was on the uppermost reaches of the river, i.e. in the area surrounded by Mts. Eniwa and Bibui. In the case of the Takapchi, a river much larger than those mentioned above, its upper reaches and the surrounding areas were visited by collectors of the bark from local groups on the upper course of the river: members of the Kuttaraushi group mostly went to the interior of the Sahorun or Nikoro, those of the Nitmap and Sanenkoro groups mostly to the source areas of the Sorapchi, an extention of the Tokapchi river group territory on the side of the Ishikari, some members of the Nitmap group farther up to the Tonukariushpet area, and the people of the Memro and Kene groups usually to the interior of the Pise or Sorapchi. But there is no evidence to show that local groups other than those mentioned above, i.e. local groups on its middle or lower course, came up to the area for that purpose. The Fushiko group, one of those local groups, seems to have gone out for the bark to the interior of the Satnai.

All other plants were usually gathered by most river groups around their own settlements. The Shikot group seems an exception. All their settlement or local groups had the traditional way of collecting the *pukusa*, Allium Victoralis, and other edible plants of good quality as well as the bark of Ulmus on the riverhead of their river Shikot, and the *shikina*, Typha latifolia, for matting, on the marshy grounds lying farthest downstream.

In the course of collecting such plants, it was not infrequent for members from different settlement or local groups living adjacent on the same river to come across one another on the same field. On such occasions they exchanged information as to where the plants in search grew in plenty or arranged elimination of overlapping in the sites visited.

1. [Errata: the word "srea" should read "area". Cf. errata sheet, p. 164-A--Analyst]

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backed by cosmology. Claim to the river valley as their territory; the members free to exploit without permission any resources in the valley except subterritories (hunting and fishing sites) maintained by various groups of lower order. The members potential colaborees in case of defence of their territory and a single unit in case of collective ritual against a catastrophic natural phenomenon. 105 619

2. The Ainu exploited their habitat by means of a set of techniques. Each of their gathering techniques, operated by an individual or in cooperation, was applied to each of specific resources in specific places at specific times; gathering techniques were linked in an order in terms of their spatial and temporal arrangement. Through the arrangement of technical devices and activities the Ainu ecological system was structured spatially and temporally. The spatio-temporal structure was closely connected with the cyclical changes in the habits of the biotic species exploited by them. 105 182

3. The periodical changes of those biotic species to which their ecological system was closely related took place approximately synchronically in different places. Accordingly the Ainu, omnivorously dependent upon various food supplies of such a character, had to exploit resources in different places at the same time. They solved this problem by means of intrafamily division of labour and intrafamily and interfamily cooperation as well as by some automatic devices. 105 476 [592]

4. Any of their gathering techniques can be manipulated by a single person or a family; the nature of techniques limits the scale of cooperation. Cooperation in gathering was usually between households in the same settlement. No more than three households cooperated in any kind of gathering activity.

5. Staple food-stuffs of the Ainu were gathered from a relatively narrow area surrounding their settlement and covering three ecological zones, i.e. the river along which they settled, its river banks and river terraces. Main hunting and fishing sites were fixed in location owing to the adaptability of their techniques to migrative habits of animals. Under these conditions, the Ainu were enabled to live in permanent settlement in spite of their dependence upon gathering life. Settlements, however, were usually small in size and were scattered along a river course in connection with the distribution of the spawning grounds of dog salmon. 105 361 311

6. The Ainu maintained several categories of territories. The major category was the territory of a river group which covered the valley of a river as distinguished by the Ainu and was maintained throughout the four seasons. 105 423 619

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known well and by whom the observer was taken care after during their life time. The ritual seems rather to have been a family affair. In either of Azuma and Otopuke, principal ancestors to be worshipped were '*ekashi* and *huchi* of the household', that is father and mother of the male household-head. In the days of their traditional life it was held on such an occasion as the bear ceremony for which wine was brewed. It was usually carried out by 'close relatives' who voluntarily came together to participate in it after finishing the bear ritual. The social aspect of the ancestor ritual in the traditional age still remains unexplained. KUBODERA (1951) and MUNRO (1962) give some data on the subject in the later period.

53) It seems certain—in fact, all informants agree on this point—that among the *pishun utaru* (coastal people) the number of hunters specializing in bear hunting, with grounds and huts mainly for that purpose, was very small in proportion to that among the *kimun utaru* (interior people). As a matter of fact, the *pishun utaru* also went hunting deer, and incidentally bears if any, on neighbouring plains and hills. What characterized them most was, however, the practice of sea-fishing.

Reports have already been made with reference to the Saru valley on the customary division of the fishing ground into sections with *kamui*-spirits attributed to each (IZUMI, 1951, pp. 30-31). The same practice is found to have prevailed in the Mukawa valley, where, it must be noted, the division and the *kamui*-spirits attributed were in close relationship with the ecology of the game and the methods of fishing employed by the Ainu.

Yanke tomari and *repun tomari*.—Of this only a small area near the river mouth, known as *tomari*, was for actual exploitation. This was the area where the outflowing river current kept the waters relatively free from wind and waves. Here smaller fishes, such as dace and grey mullet, came together and provided a favourable site for seining. At the Mukawa *tomari* only the people of the river's *pishun kotan*, Chin and Immope, habitually went fishing with seines, of which they possessed each a set in common. Measuring '22-23' fathoms in length, these nets of nettle fibre was made under the direction of each headman from sections assigned to each family in the group. Except in winter, seining was done occasionally whenever the people liked. It was a day's work going out from the settlement and back. *Repun tomari* was the zone of waters lying next to *yanke tomari*; here hinder mountain tops could be seen above fore hills. This was the field of activity for *repun tomari koru kamui*. In one area of the zone near Huihap Cape, which bordered on the territory of the Saru river group, good fishing was made of rays and plaices by setting stretch-rope hung with lines. The sea-bed there is said to be favourable for the habitation of these fishes. Only a few families of the